

EXTENDED TECHNIQUES (FOR WOODWINDS)

Ian Shanahan (February 1997)

{*Apology (Day 1)*. This lecture focusses upon woodwind instruments, but hopefully all present will learn something. Much of what will be said should also be useful for high-school and private teachers, and for HSC student composers who wish to write pieces for their classmates.}

- Although this colloquium is concerned with performance, I find it impossible to discuss this topic only in relation to performance. I'm a composer/performer myself; and this topic naturally focusses upon **composer/performer collaboration**.

- The topic is **vast**, hence the handouts (a large bibliographic source-document listing publications where detailed information can be found about each instrument, and related issues; and an example sheet showing some basic possibilities and their notation).

- The terminology **extended technique** is problematic. Why? It implies a body of musical resources that merely append canonized 'traditional' techniques. Yet some of these 'new' techniques are themselves becoming – or indeed have already become – 'standard' (e.g. the corpus of harp techniques codified by Carlos Salzedo during the 1930s). So, what we are looking at today are **playing techniques that have been developed over the last 40 years or so**.

- The current attitudinal framework is one of aesthetic "unlimitedness". Instrumental possibilities are no longer style-bound. Let me now quote the opening paragraph from my monograph **Recorder Unlimited** (1993):

Amongst forward-thinking Western musicians of today, the attitude towards sound and silence as the basic fabric of music has been governed by a new, post-Modernist aesthetic. All sound-producers are treated as musical instruments, which are then, in turn, regarded purely as sound-sources or generators in an attempt to find the full extent of their acoustic potential. Such a notion usually entails the expansion of instrumental performance techniques to an absolute limit, where applicable. Musical instruments are now being scrutinized independently of any particular musical style, because the formulation of criteria by which instrumental sounds and playing techniques may be said to be intrinsically musical or unmusical has been rendered irrelevant. All instrumental capabilities are now, in themselves, artistically valid, and are freely available to be selected and utilized by all musicians as they see fit: instruments and sounds have been "unlimited".

For example, woodwind instruments were traditionally assumed to be strictly monodic or monophonic (i.e. one pitch at a time), and restricted to the production of discrete chromatic pitches (12 e.t.). Open-minded experimentation soon proved that neither premise was true!

- Now to a brief historical overview (of milestones in the 20th century):

1. Luigi Russolo and Francesco Pratella, leading lights among the Italian Futurists, around 1910 proposed the legitimate incorporation of ‘noise’ into musical composition. They even built new ‘noise instruments’.

2. From 1910 onwards, radical (modernist) American composers – such as Charles Ives, George Antheil, Henry Cowell, Edgard Varèse, Carlos Salzedo, John Cage, Lou Harrison and Harry Partch – increasingly utilized large batteries of percussion instruments and other ‘noise producers’.

3. John Cage’s controversial **4’33”** (1952), throughout which the performer does not play their instrument, is predicated upon the notion that **all** sonic experience can be potentially musical. (The mere presence of a performer in a concert hall implies that whatever one hears during this piece – in this case, environmental sounds – will be ‘the music’.)

4. From the early 1950s, *musique concrete* (i.e. composition comprised of electronically transformed and tape-recorded sounds) and dedicated electronic sound-producers placed an emphasis upon **timbral** exploration.

5. Another group of experimenters came from the jazz world. e.g. the development of a variety of brass mutes (ca.1930–) stems from jazz arrangers’ hunger for novel sound combinations. During the 1950s and 1960s, certain reed players began to explore ‘new’ sound possibilities on their instruments (e.g. Eric Dolphy, John Coltrane, Pharoah Sanders, and William O. Smith – who continues to work with the American composer John Eaton).

6. The late 1950s saw the advent of classically trained performer-experimentalists, such as Sergio Penazzi (bsn.), Michael Vetter (rec.), Lawrence Singer and Heinz Holliger (ob.), Severino Gazzelloni and John Heiss (fl.), and Bruno Bartolozzi (composer and theorist). Gazzelloni’s collaboration with the composer Luciano Berio in the creation of Berio’s 1958 work for solo flute, **Sequenza**, is typical. The following statement (from David Cope’s **New Directions in Music**) summarizes the situation:

In no other period of music history has the performer played such an important role in the development of new sound resources and instrumental techniques. Many instrumentalists have, during the past twenty years, created a significant impact in determining and exploring the sound capabilities of their respective instruments and have more than justified the claim that this immense potential

can be applied as easily and as constructively as the use of electronic tape.

- ... which leads us naturally to the topic of **collaboration**. In creating and realizing a new work which uses extended techniques, collaboration between composer and performer is absolutely necessary! One must understand that the sonorities are generated by the instrument's architecture, not within the composer's imagination. i.e. the instrument itself is the composer's stimulus: they must actually **hear** the sounds demonstrated by the performer, and then become familiar with and memorize their sound, behaviour and other technical attributes. This in turn stimulates new ideas. Furthermore, the reliability of a sonority or gesture is often **context-based**: a sonority may work in isolation, but, mysteriously, not 'in context' within the piece itself. Composers therefore should not just slavishly copy technical information from specialist texts; they must allow performers to test their work-in-progress.

- Given a completed work that utilizes extended techniques, there is now the ongoing **performance practice** problem of **replicability**. i.e. to what extent can such sonorities be produced **precisely as notated** by performers other than those with whom the composer has directly collaborated? This issue is complex, and hinges on a number of factors, the main two being:

1. Variability of instrumental design and/or fingering system, from one model or brand to another; and

2. Individual performers' physiological limitations. e.g. men and women possess different vocal ranges; some instrumentalists' facial structures preclude their ability to fluttersong (and yet fluttersong is very frequently demanded in 20th-century music!).

Here are some solutions to this dilemma. From a composer's point of view, there are two mutually exclusive approaches – both useable within the same work! – in dealing with variability of instrumental or performer response:

1. The most common tactic is for the composer to instruct the player to experiment with variants of the data provided, in order to discover a sound corresponding as closely as possible to that notated. Composers could, for instance, specify an alternative (or *ossia*): this is particularly useful when working with techniques that for some performers are not viable for anatomical reasons.

2. Alternatively, the composer might compel a player to adhere rigidly to the specified technical data, in which case any incongruities between the resultant sound and its notation are deemed acceptable, and part of the composer's intention. e.g. my own recorder piece **Helical Ribbon** is based upon 22 fingerings that must not be

modified: each recorder will yield its own unique set of multiphonics, with unique timbres and microintonations.

- Consequently, when working with fingering-based techniques (e.g. microtones, multiphonics, fingered vibrati, and fingered timbral variants), technical fingering charts, in score or monograph, should not necessarily be considered absolute. Charts are best treated as a **starting-point for experimentation**. As such, despite their inadequacies, they are a valuable resource. In any case, a performer's solution to any technical problem or discrepancy in a piece ought to coincide – in detail and/or spirit – as much as possible with the composer's wishes.

A further point: technical data cannot be transferred isomorphically from one size of a woodwind-instrument's family to another, with an expectation that an equivalent transposed sonority will result (although in some cases it does). Recent texts now routinely present separate charts for each size within a given family. e.g. Artaud & Geay's **Present Day Flutes** offers distinct information for piccolo, alto flute, and bass flute; Daniel Kientzy's **Saxophone Multiphonics** contains five different charts, for sopranino, soprano, alto, tenor, and baritone saxophones; Henri Bok's manual is devoted exclusively to extended techniques for the bass clarinet.

SPECIFIC ADVICE TO COMPOSERS

- Many works from the 1960s and 1970s that make use of extended techniques are merely 'sales catalogues' of what were then 'new' sounds; they rely entirely upon aesthetic 'shock tactics' to make their impact. Nowadays, a smorgasbord of vulgar 'effects' is surely to be avoided, because these sounds are now quite familiar. Such superficiality – a heavy reliance upon surface gesture – cannot sustain worthwhile or profound musical thought. Instead, one has to appreciate that non-traditional resources demand new formal approaches that **integrate** these sounds into the work's fabric at various architectonic levels. e.g. microtones can be treated **inflectionally** (i.e. as intonational deviations away from chromatic pitches), a "foreground" approach; they can also be deployed **structurally**, in pitch-sets that are conceived microtonally at an earlier stage in the compositional process. Please be **intelligent** and **musical** whenever you compose...

- On the subject of **notation**, always invoke Occam's Razor. i.e. wherever feasible, appropriate or build upon standardized notations of analogous techniques for other instruments (e.g. fluttertonguing and bowed tremoli on strings have identical notations, because both techniques rely upon rapid iterations). Do not reinvent the wheel! Only devise new notations when absolutely necessary – for example, if the technique is genuinely new and has no equivalent elsewhere – and then ensure that it is as graphically self-explanatory as possible.

- Since many instrumentalists are still relatively unfamiliar with extended techniques, it is essential to provide clear, precise, and exhaustive technical data in score and parts. e.g. in the score's preface, you should provide a key to the notation (explaining your symbology), special fingerings, other parameters, the model of instrument used in research, etc. For fingering-based techniques, it is helpful to provide a comprehensive chart in your score's preface – as well as **tablature pictographs** in the score and parts. (This allows the player to easily verify their instrument's response to each fingering.)

- In workshoping your piece, what does one do if a performer asserts that a given passage is “impossible” or “extremely difficult”? There are several options, all of them requiring diplomatic skills:

1. The performer may be absolutely right! For instance, you may have mistakenly called for pitches that truly lie beyond the instrument's range: these are, of course, unplayable by anybody. Or a desired multiphonic's component-pitches might be acoustically unobtainable. Here, the only option is to recompose the passage in question.

2. **This** performer may be having difficulties, whereas one who is more experienced might not. You can either stick to your guns (i.e. not adjust the score), while helping this player find an alternative solution, perhaps; you could write an *ossia* into your score; or you could rewrite the passage. Sometimes, it is simply the case that a performer is pressed for time in learning the piece (though this is not the composer's problem, assuming you have delivered your piece on time!). Only composerly experience will ascertain a performer's motivation in claiming ‘impossibility’. But close **collaboration** should guarantee a satisfactory outcome.

SPECIFIC ADVICE TO PERFORMERS

- If you wish to play genuine new music, the bottom line is that you are obliged to explore the full potential of your instrument. With extended techniques, a lot of nuances and technical details may well be unnotatable. Therefore, players must become totally familiar with their instrument, and with each sonority's many performance requirements. This in turn demands technical **control**, which will develop only through practice, practice, and yet more practice! – preferably in consultation with a knowledgeable teacher and a good set of texts. (Even prefaces to scores are valuable.) Don't regard hard work as onerous, or beneficial only for playing ‘new music’: acquiring new skills will enhance (not impair) your technique in playing traditional repertoire. e.g. you will develop heightened sensitivity of articulation, improved breath control and fingering dexterity, and a better ear in detecting nuances

of timbre and intonation. (The accusation that extended techniques will damage your instrument and your technique is just a myth perpetuated by reactionary teachers.) Nevertheless, there are two hurdles to overcome:

1. New modes of playing do require perseverance. Detailed discussion in specialist texts is enormously beneficial.

2. Fear of the musically unknown or unfamiliar (this is, of course, a rampant problem in our overly nostalgic postmodern/conservative culture) can cause techniques which are inherently straightforward and natural to be extremely difficult. This is just a problem of **attitude**. e.g. most recorder players become glacial whenever they see a quartertone in their part. Yet there are **no** new techniques to be perfected! (Most quartertone fingerings are **cross fingerings**, like those of many standard chromatic pitches on the recorder.)

- To conclude: here follows a very basic listing, and demonstration of, some extended techniques for woodwinds. Note that many of these can be combined. **[See sheet]**

1. Extended pitch-range (clarinets & saxophones: teeth on reed).
 2. Microtones.
 3. Alternative fingerings (yielding timbral variety), including harmonics and “harmonic trills”.
 4. Multiple sonorities: multiphonics; combined vocal and instrumental sounds.
 5. Glissando/portamento.
 6. Pitch-bend (embouchure-, breath- or fingering-generated).
 7. Various types of vibrato.
 8. Articulation possibilities: fluttertonguing, tongue tremolo, slap tongue, exaggerated attacks, “lip pizzicato” (flute).
 9. Air-noise.
 10. Key- or finger-percussion.
- **Improvise** (if time).

~~~~~